

TCAP Achievement, Grade 8, Science
Criterion Referenced Test (CRT) Reporting Categories with State Performance Indicators (SPI)

Organisms Interact with the Environment	
SPI#	State Performance Indicator
8.2.1	Distinguish among commensalism parasitism, and mutualism.
8.2.2	Identify the earth's major biomes.
8.2.3	Choose the appropriate biome for an organism, given a description.
8.2.4	Identify biotic and abiotic factors in a biome.
Heredity and Reproduction	
SPI#	State Performance Indicator
8.4.1	Differentiate between complete and incomplete metamorphosis.
8.4.2	Distinguish between sexual and asexual methods of reproduction.
8.4.3	Differentiate between dominant and recessive traits.
8.4.4	Predict the genotypes of offspring in a monohybrid cross using a Punnett Square.
8.4.5	Select models or illustrations that are representations of DNA.
8.4.6	Associate a change in a DNA molecule with a mutation.
8.4.7	Identify types of genetic engineering (i.e., gene splicing and cloning) and evaluate the impact of genetic engineering on society.
Diversity and Adaptation	
SPI#	State Performance Indicator
8.5.1	Identify similarities and differences among organisms.
8.5.2	Classify plants and animals into groups according to their features.
8.5.3	Infer the relatedness of different organisms.
8.5.4	Use a simple classification key to identify an unknown organism.
8.5.5	Determine the genus and species of an organism using a dichotomous key.
Earth Features	
SPI#	State Performance Indicator
8.9.1	Label a cross section of the earth.
8.9.2	Identify the major plates of the world.
8.9.3	Recognize the relationship between continental drift and plate tectonics.
8.9.4	Deduce plate movements as the major cause of geological events.
Earth Resources	
SPI#	State Performance Indicator
8.10.1	Identify factors that cause rocks to break down.
8.10.2	Distinguish between renewable and nonrenewable resources.
8.10.3	Identify various energy sources.
8.10.4	Distinguish among sedimentary, igneous, and metamorphic rocks and interpret a simple rock cycle diagram.
8.10.5	Infer that human activities may be helpful or harmful to the environment.
8.10.6	Identify rocks and minerals given a table of physical properties.
Forces and Motion	
SPI#	State Performance Indicator
8.11.1	Recognize that forces cause changes in speed and/or the direction of motion.
8.11.2	Identify simple machines.
8.11.3	Recognize the relationship between mass, force, and acceleration.
8.11.4	Identify the relationship between the mass of objects, the distance between them, and the amount of gravitational attraction.
8.11.5	Choose the most appropriate simple machine to use for a specific task.
8.11.6	Identify Newton's three laws of motion and relate the first two laws to the concepts of inertia and momentum.
8.11.7	Solve problems pertaining to distance, speed, velocity, and time, given illustrations, diagrams, graphs, or scenarios.
Interactions of Matter	
SPI#	State Performance Indicator
8.13.1	Distinguish between physical and chemical changes.
8.13.2	Identify a substance as an acid or a base, given its pH.
8.13.3	Recognize that the mass of the reactants is the same as the mass of the products, given simple chemical equations.
8.13.4	Determine how temperature and concentration might affect the rate of a chemical reaction.
8.13.5	Classify a reaction as exothermic or endothermic.